#### PATENT COOPERATION TREATY



#### From the INTERNATIONAL SEARCHING AUTHORITY

	1 0 1					
BAE SYSTEMS PLC Group IP Dept. P.O. Box 87, Lancaster House Farnborough Aerospace Centre Farnborough, Hampshire GU14 6YU UNITED KINGDOM	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION  SEP 2003 (PCT Rule 44.1)					
	Date of mailing (day/month/year) 16/09/2003					
Applicant's or agent's file reference XA1540	FOR FURTHER ACTION See paragraphs 1 and 4 below					
International application No. PCT/GB 03/02746	International filing date (day/month/year) 27/06/2003					
Applicant BAE SYSTEMS PLC						
1. X  The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.  Filing of amendments and statement under Article 19:  The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):						
When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.						
Where? Directly to the International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Fascimile No.: (41–22) 740.14.35						
For more detailed instructions, see the notes on the accompanying sheet.						

With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

The applicant is hereby notified that no International Search Report will be established and that the declaration under

no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Further action(s): The applicant is reminded of the following:

Article 17(2)(a) to that effect is transmitted herewith.

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority European Patent Office, P.B. 5818 Patentlaan 2

NL-2280 HV Rijswijk

Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016

Authorized officer

Silke Schmeth sen

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

#### **INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19**

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international polication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been is filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/may accompany the amendments?

#### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled:
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

# The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
   "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
   "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
   "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

#### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

#### It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

#### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

#### Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

# PATENT COOPERATION TREATY PCT

### **INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 be ACTION							
International application No.	International filing date (day/	month/year) (	(Earliest) Priority D	ate (day/month/year)			
PCT/GB 03/02746	27/06/200	3	09/	07/2002			
Applicant	· · <del>-</del>						
BAE SYSTEMS PLC							
This International Search Report has bee according to Article 18. A copy is being tra			ty and is transmitte	d to the applicant			
This International Search Report consists  It is also accompanied by	of a total of04 a copy of each prior art docum	sheets. nent cited in this rep	oort.				
Basis of the report			= -	•			
With regard to the language, the language in which it was filed, unline			of the international	application in the			
the international search w Authority (Rule 23.1(b)).	vas carried out on the basis of a	a translation of the i	international applic	ation furnished to this			
b. With regard to any <b>nucleotide an</b> was carried out on the basis of th		sclosed in the inter	national application	, the international search			
contained in the international application in written form.							
filed together with the inte	filed together with the international application in computer readable form.						
furnished subsequently to this Authority in written form.							
furnished subsequently to	furnished subsequently to this Authority in computer readble form.						
the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.							
the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished				n sequence listing has been			
2. Certain claims were fou	2. Certain claims were found unsearchable (See Box I).						
3. Unity of invention is lac	3. Unity of invention is lacking (see Box II).						
4. With regard to the <b>title</b> ,							
the text is approved as su	ubmitted by the applicant.						
the text has been establis	shed by this Authority to read a	s follows:					
HIGH RANGE RESOLUTION RADAR SYSTEM							
5. With regard to the abstract,							
TX the text is approved as submitted by the applicant.							
the text has been established	shed, according to Rule 38.2(b) e date of mailing of this interna						
6. The figure of the <b>drawings</b> to be pub	lished with the abstract is Figur	re No.	3				
as suggested by the appl	icant.			None of the figures.			
because the applicant fai	led to suggest a figure.						
because this figure better	characterizes the invention.			·			

#### INTERNATIONAL SEARCH REPORT

International Application No PCT/GB 202746

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01S13/26 G01S13/28

G01S7/288

G01S7/282

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7-601S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
EP 0 291 337 A (NIPPON ELECTRIC CO) 17 November 1988 (1988-11-17)	1,2,4, 6-9,11, 12,14, 15,17,18
column 1, line 1 -column 3, line 65 figure 1	
US 4 709 237 A (MARCUARD ALAIN ET AL) 24 November 1987 (1987-11-24) column 1, line 1 -column 3, line 14 page 1	1-22
US 6 211 812 B1 (MOSER KENNETH RAYMOND ET AL) 3 April 2001 (2001-04-03) column 1, line 13 -column 5, line 10 figure 2	1-22
	EP 0 291 337 A (NIPPON ELECTRIC CO) 17 November 1988 (1988-11-17)  column 1, line 1 -column 3, line 65 figure 1  US 4 709 237 A (MARCUARD ALAIN ET AL) 24 November 1987 (1987-11-24) column 1, line 1 -column 3, line 14 page 1  US 6 211 812 B1 (MOSER KENNETH RAYMOND ET AL) 3 April 2001 (2001-04-03) column 1, line 13 -column 5, line 10 figure 2

Further documents are listed in the continuation of box C.	χ Patent family members are listed in annex.
Special categories of cited documents:      "A" document defining the general state of the art which is not considered to be of particular relevance     "E" earlier document but published on or after the international filing date      "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)      "O" document referring to an oral disclosure, use, exhibition or other means      "P" document published prior to the international filing date but later than the priority date claimed	<ul> <li>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> <li>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>"&amp;" document member of the same patent family</li> </ul>
Date of the actual completion of the international search	Date of mailing of the international search report
10 September 2003	16/09/2003
Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	van Norel, J

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## INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 02746

		PC1/GB	702746
C.(Continu	ation) DOCUMENTS CONSIDERED E RELEVANT		Delevent to electric Ma
Category	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
Α	GB 1 587 357 A (INT STANDARD ELECTRIC CORP) 1 April 1981 (1981-04-01) page 1, line 1 -page 3, line 60 figures 1-3		1-22
A	COHEN M N: "An overview of high range resolution radar techniques" PROCEEDINGS OF THE NATIONAL TELESYSTEMS CONFERENCE. ATLANTA, MARCH 26 - 27, 1991, NEW YORK, IEEE, US, vol. 1, 26 March 1991 (1991-03-26), pages 107-115, XPO10047012 ISBN: 0-7803-0062-9 the whole document		1-22

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### INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/GB

Patent document cited in search report	1	ublication date		Patent family member(s)		Publication date
EP 0291337	A	17-11-1988	JP	1954054	-	28-07-1995
			JP	6072920	_	14-09-1994
			JP	63282677		18-11-1988
			EΡ	0291337	A2	17-11-1988
			US	5079556	Α	07-01-1992
US 4709237		24-11-1987	FR	2574557	A1	13-06-1986
			DE	3574058	D1	07-12-1989
			EP	0185585	A1	25-06-1986
			IL	77200	Α	12-07-1990
US 6211812	B1	03-04-2001	US	2001015699	A1	23-08-2001
GB 1587357		01-04-1981	NONE			







BAE SYSTEMS plc
% BAE Systems plc
Group IP Department
Lancaster House, P O Box 87
Farnborough Aerospace Centre
FARNBOROUGH, Hants

The Patent Office Patents Directorate

Concept House Cardiff Road, Newport South Wales NP10 8QQ

Examiner: 01633 814919

E-mail: Richard.Kerslake@patent.gov.uk

Switchboard: 01633 814000

Fax: 01633 814444 Minicom: 08459 222250 DX 722540/41 Cleppa Park 3 http://www.patent.gov.uk

Your Reference: XA1540 Application No: GB 0215967.1

11 March 2003

Dear Sirs

Patents Act 1977: Search Report under Section 17(5)

I enclose two copies of my search report and three copies of the citations.

#### Publication

I estimate that, provided you have met all formal requirements, preparations for publication of your application will be completed soon after 2 December 2003. You will then receive a letter informing you of completion and telling you the publication number and date of publication.

#### Amendment/withdrawal

If you wish to file amended claims for inclusion with the published application, or to withdraw the application to prevent publication, you must do so before the preparations for publication are completed. No reminder will be issued. If you write to the Office less than 3 weeks before the above completion date, please mark your letter prominently: "URGENT - PUBLICATION IMMINENT".

Yours faithfully

Richard Kerslake Examiner

<sup>†</sup>Use of E-mail: Please note that e-mail should be used for correspondence only.







**Application No:** Claims searched: GB 0215967.1

1-22

Examiner: Date of search: Richard Kerslake 10 March 2003

Patents Act 1977: Search Report under Section 17

Docume	Documents considered to be relevant:					
Category	Relevant to claims	Identity of document and passage or figure of particular relevance				
X	1,6 at least	GB 2149992 A	(EPC LABORATORIES) Figure 1 & Page 2 Line 3 - Page 4 Line 42			
Х	1,6 - at least	US 20020075178 A1	(WOODINGTON et al.) Figure 3 & Paragraphs 48-50			
X	1,6 at least	US 4237461 A	(CANTRELL et al.) Figure 1 & Column 1 Line 66 - Column 3 Line 30			
A	٠,	US 5719580 A	(CORE) Column 1 Line 58 - Column 2 Line 45			
A	<u>.</u>	US 3648177 A	(HIMMEL) Column 1 Line 54- Column 2 Line 44			
1						

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х	Document indicating lack of novelty or inventive step	Α	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

#### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKCV:

H<sub>4</sub>D

Worldwide search of patent documents classified in the following areas of the IPC7:

G01S

The following online and other databases have been used in the preparation of this search report:

EPODOC, JAPIO, WPI